

Review Questions

1. Which of the following statements are true? (Choose all that apply)
 - A. Runtime exceptions are the same thing as checked exceptions.
 - B. Runtime exceptions are the same thing as unchecked exceptions.
 - C. You can declare only checked exceptions.
 - D. You can declare only unchecked exceptions.
 - E. You can handle only `Exception` subclasses.
2. Which of the following pairs fill in the blanks to make this code compile? (Choose all that apply)

```
7: public void ohNo() _____ Exception {  
8:     _____ Exception();  
9: }
```

 - A. On line 7, fill in `throw`
 - B. On line 7, fill in `throws`
 - C. On line 8, fill in `throw`
 - D. On line 8, fill in `throw new`
 - E. On line 8, fill in `throws`
 - F. On line 8, fill in `throws new`
3. When are you required to use a `finally` block in a regular `try` statement (not a `try-with-resources`)?
 - A. Never.
 - B. When the program code doesn't terminate on its own.
 - C. When there are no `catch` blocks in a `try` statement.
 - D. When there is exactly one `catch` block in a `try` statement.
 - E. When there are two or more `catch` blocks in a `try` statement.
4. Which exception will the following throw?

```
Object obj = new Integer(3);  
String str = (String) obj;  
System.out.println(str);
```

 - A. `ArrayIndexOutOfBoundsException`
 - B. `ClassCastException`
 - C. `IllegalArgumentException`
 - D. `NumberFormatException`
 - E. None of the above.

5. Which of the following exceptions are thrown by the JVM? (Choose all that apply)
- A. `ArrayIndexOutOfBoundsException`
 - B. `ExceptionInInitializerError`
 - C. `java.io.IOException`
 - D. `NullPointerException`
 - E. `NumberFormatException`
6. What will happen if you add the statement `System.out.println(5 / 0);` to a working `main()` method?
- A. It will not compile.
 - B. It will not run.
 - C. It will run and throw an `ArithmeticException`.
 - D. It will run and throw an `IllegalArgumentException`.
 - E. None of the above.
7. What is printed besides the stack trace caused by the `NullPointerException` from line 16?

```
1: public class DoSomething {  
2:     public void go() {  
3:         System.out.print("A");  
4:         try {  
5:             stop();  
6:         } catch (ArithmeticException e) {  
7:             System.out.print("B");  
8:         } finally {  
9:             System.out.print("C");  
10:        }  
11:        System.out.print("D");  
12:    }  
13:    public void stop() {  
14:        System.out.print("E");  
15:        Object x = null;  
16:        x.toString();  
17:        System.out.print("F");  
18:    }  
19:    public static void main(String[] args) {  
20:        new DoSomething().go();  
21:    }  
22: }
```

- A. AE
- B. AEBCD

- C. AEC
 - D. AECD
 - E. No output appears other than the stack trace.
8. What is the output of the following snippet, assuming a and b are both 0?
- ```
3: try {
4: return a / b;
5: } catch (RuntimeException e) {
6: return -1;
7: } catch (ArithmeticException e) {
8: return 0;
9: } finally {
10: System.out.print("done");
11: }
```
- A. -1
  - B. 0
  - C. done-1
  - D. done0
  - E. The code does not compile.
  - F. An uncaught exception is thrown.
9. What is the output of the following program?
- ```
1: public class Laptop {
2:     public void start() {
3:         try {
4:             System.out.print("Starting up ");
5:             throw new Exception();
6:         } catch (Exception e) {
7:             System.out.print("Problem ");
8:             System.exit(0);
9:         } finally {
10:            System.out.print("Shutting down ");
11:        }
12:    }
13:     public static void main(String[] args) {
14:         new Laptop().start();
15:    } }
```
- A. Starting up
 - B. Starting up Problem
 - C. Starting up Problem Shutting down

- D. Starting up Shutting down
- E. The code does not compile.
- F. An uncaught exception is thrown.

10. What is the output of the following program?

```
1: public class Dog {
2:     public String name;
3:     public void parseName() {
4:         System.out.print("1");
5:         try {
6:             System.out.print("2");
7:             int x = Integer.parseInt(name);
8:             System.out.print("3");
9:         } catch (NumberFormatException e) {
10:            System.out.print("4");
11:        }
12:    }
13:    public static void main(String[] args) {
14:        Dog leroy = new Dog();
15:        leroy.name = "Leroy";
16:        leroy.parseName();
17:        System.out.print("5");
18:    } }
```

- A. 12
- B. 1234
- C. 1235
- D. 124
- E. 1245
- F. The code does not compile.
- G. An uncaught exception is thrown.

11. What is the output of the following program?

```
1: public class Cat {
2:     public String name;
3:     public void parseName() {
4:         System.out.print("1");
5:         try {
6:             System.out.print("2");
7:             int x = Integer.parseInt(name);
8:             System.out.print("3");
```

```
9:      } catch (NullPointerException e) {
10:          System.out.print("4");
11:      }
12:      System.out.print("5");
13:  }
14:  public static void main(String[] args) {
15:      Cat leo = new Cat();
16:      leo.name = "Leo";
17:      leo.parseName();
18:      System.out.print("6");
19:  }
20: }
```

- A. 12, followed by a stack trace for a `NumberFormatException`
- B. 124, followed by a stack trace for a `NumberFormatException`
- C. 12456
- D. 12456
- E. 1256, followed by a stack trace for a `NumberFormatException`
- F. The code does not compile.
- G. An uncaught exception is thrown.

12. What is printed by the following? (Choose all that apply)

```
1: public class Mouse {
2:     public String name;
3:     public void run() {
4:         System.out.print("1");
5:         try {
6:             System.out.print("2");
7:             name.toString();
8:             System.out.print("3");
9:         } catch (NullPointerException e) {
10:             System.out.print("4");
11:             throw e;
12:         }
13:         System.out.print("5");
14:     }
15:     public static void main(String[] args) {
16:         Mouse jerry = new Mouse();
17:         jerry.run();
18:         System.out.print("6");
19:     } }
```

- A. 1
 - B. 2
 - C. 3
 - D. 4
 - E. 5
 - F. 6
 - G. The stack trace for a `NullPointerException`
13. Which of the following statements are true? (Choose all that apply)
- A. You can declare a method with `Exception` as the return type.
 - B. You can declare any subclass of `Error` in the throws part of a method declaration.
 - C. You can declare any subclass of `Exception` in the throws part of a method declaration.
 - D. You can declare any subclass of `Object` in the throws part of a method declaration.
 - E. You can declare any subclass of `RuntimeException` in the throws part of a method declaration.
14. Which of the following can be inserted on line 8 to make this code compile? (Choose all that apply)
- ```
7: public void ohNo() throws IOException {
8: // INSERT CODE HERE
9: }
```
- A. `System.out.println("it's ok");`
  - B. `throw new Exception();`
  - C. `throw new IllegalArgumentException();`
  - D. `throw new java.io.IOException();`
  - E. `throw new RuntimeException();`
15. Which of the following are unchecked exceptions? (Choose all that apply)
- A. `ArrayIndexOutOfBoundsException`
  - B. `IllegalArgumentException`
  - C. `IOException`
  - D. `NumberFormatException`
  - E. Any exception that extends `RuntimeException`
  - F. Any exception that extends `Exception`
16. Which scenario is the best use of an exception?
- A. An element is not found when searching a list.
  - B. An unexpected parameter is passed into a method.

- C. The computer caught fire.
- D. You want to loop through a list.
- E. You don't know how to code a method.

17. Which of the following can be inserted into `Lion` to make this code compile? (Choose all that apply)

```
class HasSoreThroatException extends Exception {}
class TiredException extends RuntimeException {}
interface Roar {
 void roar() throws HasSoreThroatException;
}
class Lion implements Roar { // INSERT CODE HERE
}
```

- A. `public void roar() {}`
- B. `public void roar() throws Exception {}`
- C. `public void roar() throws HasSoreThroatException {}`
- D. `public void roar() throws IllegalArgumentException {}`
- E. `public void roar() throws TiredException {}`

18. Which of the following are true? (Choose all that apply)

- A. Checked exceptions are allowed to be handled or declared.
- B. Checked exceptions are required to be handled or declared.
- C. Errors are allowed to be handled or declared.
- D. Errors are required to be handled or declared.
- E. Runtime exceptions are allowed to be handled or declared.
- F. Runtime exceptions are required to be handled or declared.

19. Which of the following can be inserted in the blank to make the code compile? (Choose all that apply)

```
public static void main(String[] args) {
 try {
 System.out.println("work real hard");
 } catch (_____ e) {
 } catch (RuntimeException e) {
 }
}
```

- A. `Exception`
- B. `IOException`
- C. `IllegalArgumentException`
- D. `RuntimeException`

- E. StackOverflowError
- F. None of the above.

**20.** What does the output of the following contain? (Choose all that apply)

```
12: public static void main(String[] args) {
13: System.out.print("a");
14: try {
15: System.out.print("b");
16: throw new IllegalArgumentException();
17: } catch (IllegalArgumentException e) {
18: System.out.print("c");
19: throw new RuntimeException("1");
20: } catch (RuntimeException e) {
21: System.out.print("d");
22: throw new RuntimeException("2");
23: } finally {
24: System.out.print("e");
25: throw new RuntimeException("3");
26: }
27: }
```

- A. abce
- B. abde
- C. An exception with the message set to "1"
- D. An exception with the message set to "2"
- E. An exception with the message set to "3"
- F. Nothing; the code does not compile.